Range and Fiber Ownership & BCTC Update for Army Standing Committee

ISEC Overall Mission

Mission: To provide worldwide systems engineering, integration, implementation, quality assurance, test & acceptance, and technical support for information transport infrastructure and networks in support of enterprise information systems

Core Competencies:

- Installation Infrastructure Engineering and Implementation
- Telephone Switching Systems
- Local and Wide Area Networks
- Information Systems for Military Construction, Army
- Air Traffic Control Systems
- Information Assurance

HOW DO THIS APPLY TO THE ARMY TRAINING SUPPORT SYSTEM PROGRAM?

Sustainable Range Program (SRP)

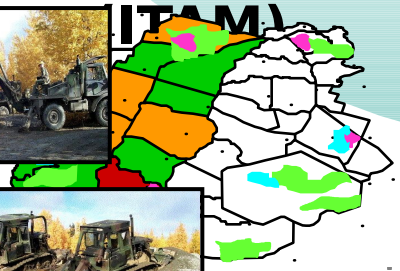
Range Complexes/ Modernization

- Urban Ops
- Collective
- Crew
- Individua

Maneuver Acres

- Heavy

Training Area Management (TAM)



Ops/Manpower (VSCW)

SEC: Excellence in Engineering

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Range POM

MCA

- **10-13 MILCON: Stabilize under VSCA guidance**
  - 3 Ranges that have pay construction or OPA increases
    - (Drum FY10 $22M; Hood DMPTR FY11 $18M Hood DMPRC FY12 $30M)
    - - **UDARI Ranges need to be assessed for MILCON execution**
- **Valid PA Increases will be covered**
- **Most New MILCON Requirements in FY 14-15**
- **Assess CACTF expansion to support HITS (ROC and Storage)**

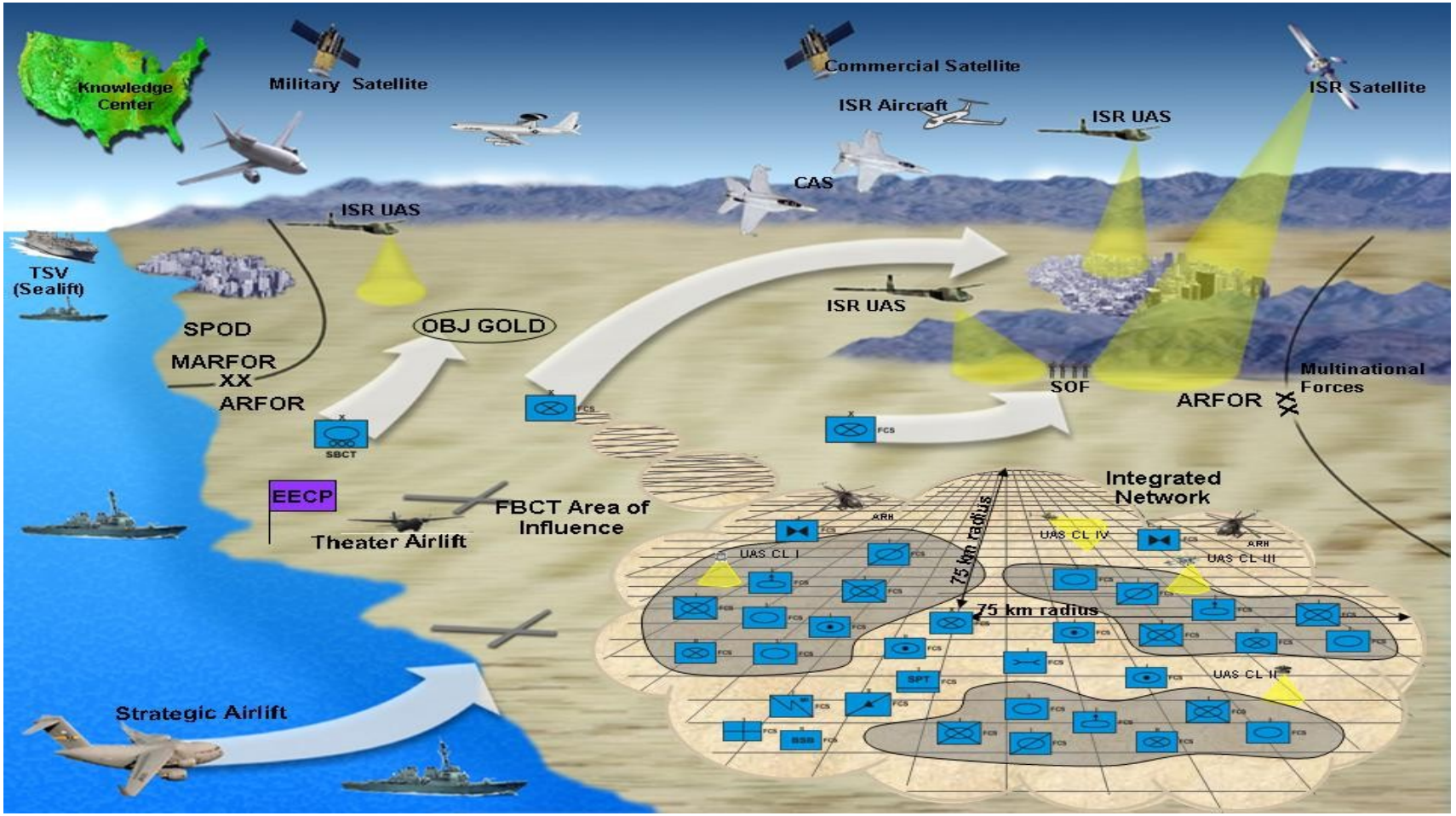
MCAR

- **Increase MCAR in FY11 to improve appropriation investment profile**
- **Assess & program USAR range requirements to support pre/post mobilization concept**

MCNG

- **Add P&D requirements and funding back into MCNG (removed during MILCON IPT build)**
- **Fund ARNG/USAR co-use ranges**

Training Environment



Fort Campbell

Phase III (option): Digital Range Connectivity

PN 88223: Aviation Digital Multi-Purpose Training Range, FY09

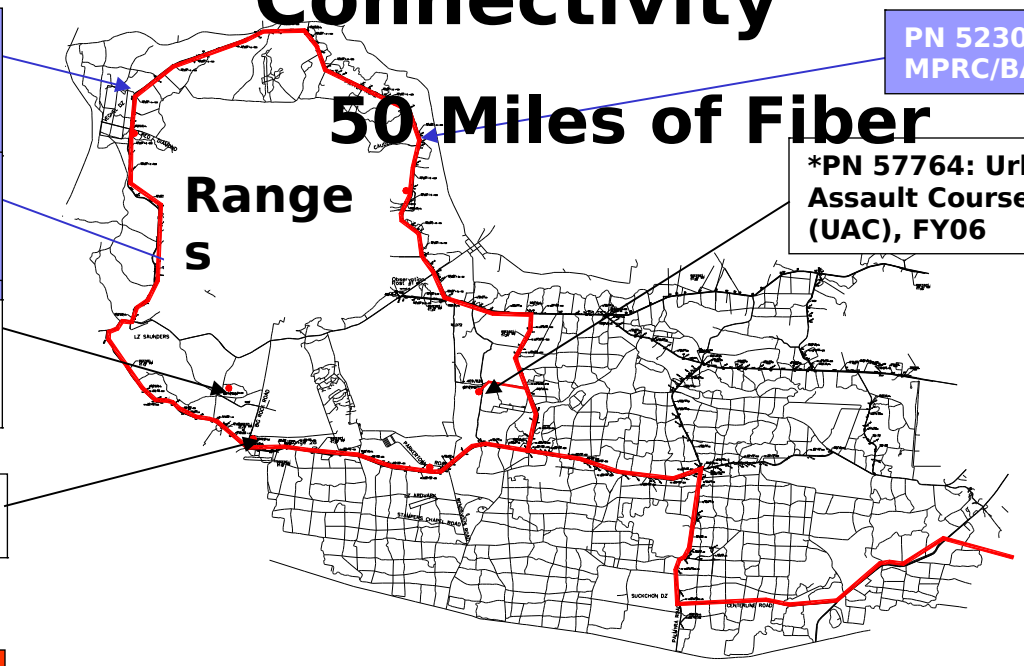
PN 51833: Combined Arms Collective Training Facility, FY06

***PN 60305: Urban Assault Course (UAC) Completed FY05**

***PN 57763: Shoot House (SH), FY05**

PN 52305: Digital MPRC/BAX, FY09

***PN 57764: Urban Assault Course (UAC), FY06**



Legend

New Fiber

Digital Ranges

***UAC and SH ranges are not currently digitized. Plans are in place to digitize in the future.**

Connection Point

- Digital Range
- Non-digital Range
- Forward Operating Base
- Maneuver Training Areas
- The Fiber Optical Cable (FOC) is own by the DOIM

LVC-IA and Infrastructure Defined

The LVC-IA and Infrastructure consists of two mutually dependent components. **The LVC Integrating Architecture is a network-centric linkage** that collects, retrieves & exchanges data among Live Instrumentation, Virtual Simulators, and Constructive Simulations and between Joint & Army Battle Command Systems (BCS). **This architecture provides the common protocols, specifications, standards & interfaces that help standardize common LVC** components and tools required for interoperability of LVC components for simulation/stimulation (SIM/STIM) of unit Battle Command Systems for mission rehearsals and training.

The Live Virtual Constructive Integrating Architecture defines **"how"** information is exchanged among the LVC domains and Battle Command Systems. The LVC Integrating Architecture includes common LVC components such as **Enterprise AAR, C2 Adapters, Terrain Databases, Multi-level Security, and Hardware/Software.**

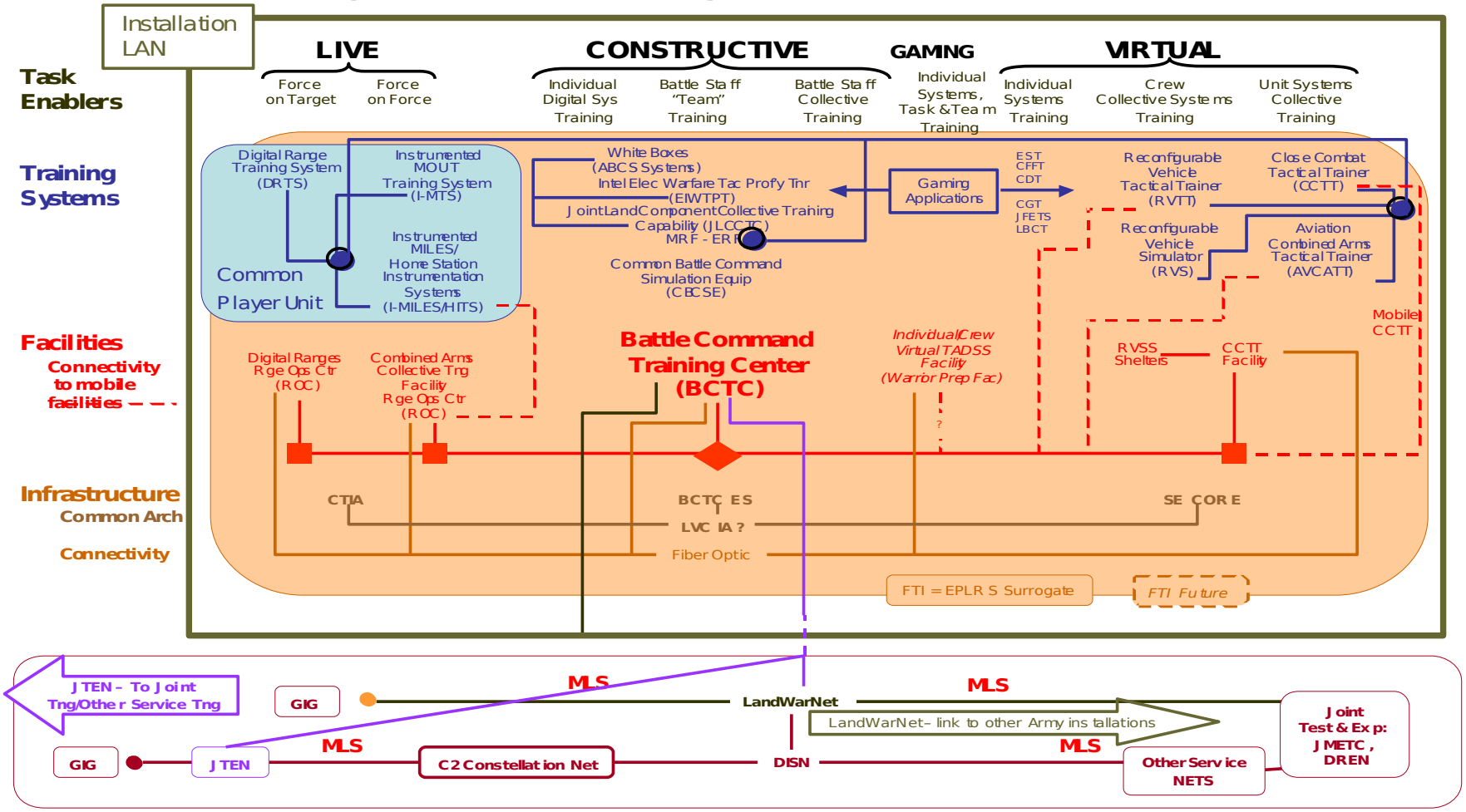
The Live Virtual Constructive Training Infrastructure provides **the "means" for communicating, exchanging data and networking for all of the LVC domains**. The LVC infrastructure includes **installations' foundational elements** and components needed to perform net-centric battle command training and includes: **Facilities,** Power; **Communications (RF/Fiber) Networks**; Training Support Systems (TADSS); Personnel & Equipment; Resources; and Management Structure & Organization.

LVC-IA (cont)

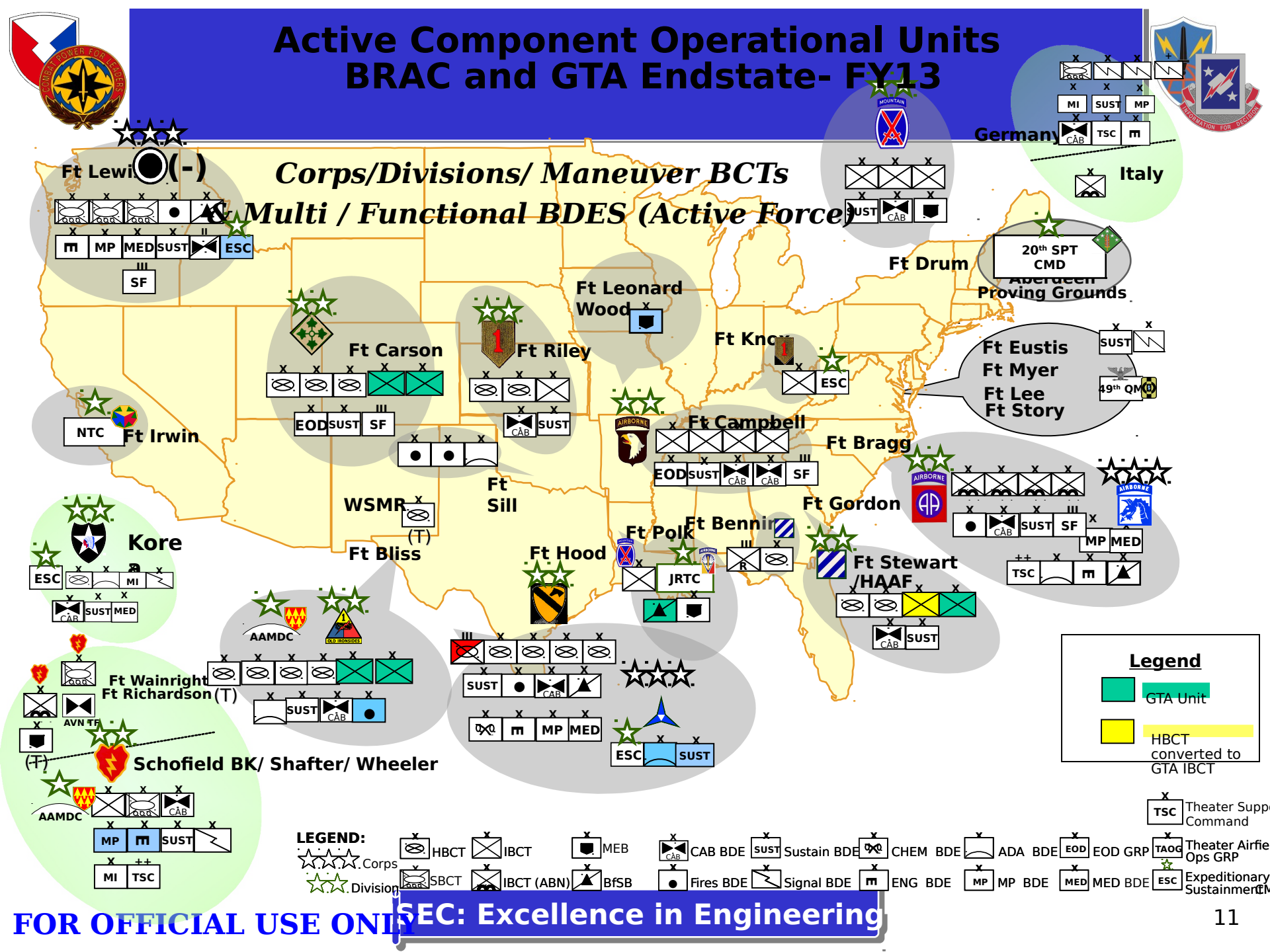
- LVC-IA, along with an associated installation's supporting Training Infrastructure, are mutually dependent on each other to create an LVC Integrated Training Environment.
- **The end-state goal of the LVC-IA and Infrastructure is to enable an LVC Integrated Training Environment that approximates the Operating Environment and provides:**
- **Value-Added training and Mission Rehearsal opportunities to Commanders and units**

LVC Integrated

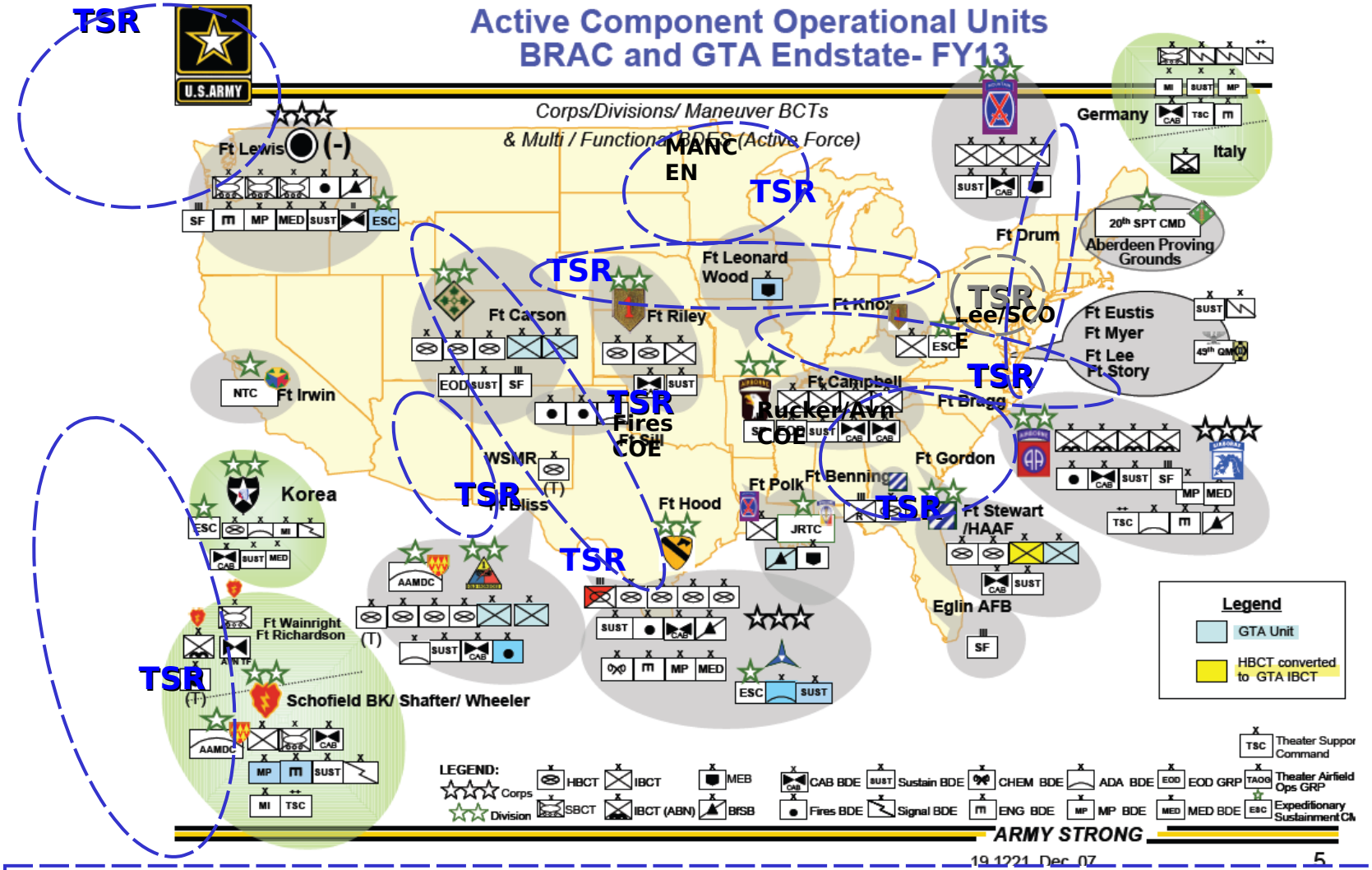
LVC Integrated Training Environment (LVC ITE)



Active Component Operational Units
BRAC and GTA Endstate- FY13



TSR Footprint *(w/primary Hub & Spoke)*



TSR Will remain Hub-Spoke oriented (*Division-AC/RC Region-COE Affiliation*)

ISSUES

Unfinanced Requirement

- Backbone Connectivity to the Digital Ranges
- Agreement with G3 and G6 for the following:

  - If range is < 10,000 feet from an existing backbone Connection G3 will fund as part of the range construction effort

  - If range is > 10,000 feet from an existing backbone Connection G6 will fund as part of the I3MP effort or special

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Infrastructure Issues

- Issues with this arrangement:
  - G6 funding for I3MP lags behind the construction of ranges
  - I3MP has much bigger requirement to cover than just connectivity
  - DOIMs unwilling to allow usage of scarce fiber resources
  - Connectivity to ranges are expensive even to “plow in” fiber due to the distance back to nearest real backbone connection point
  - New – BRAC now further impacting G6 ability to reach the range

Fixed Tactical Internet

Lack of FTI coverage

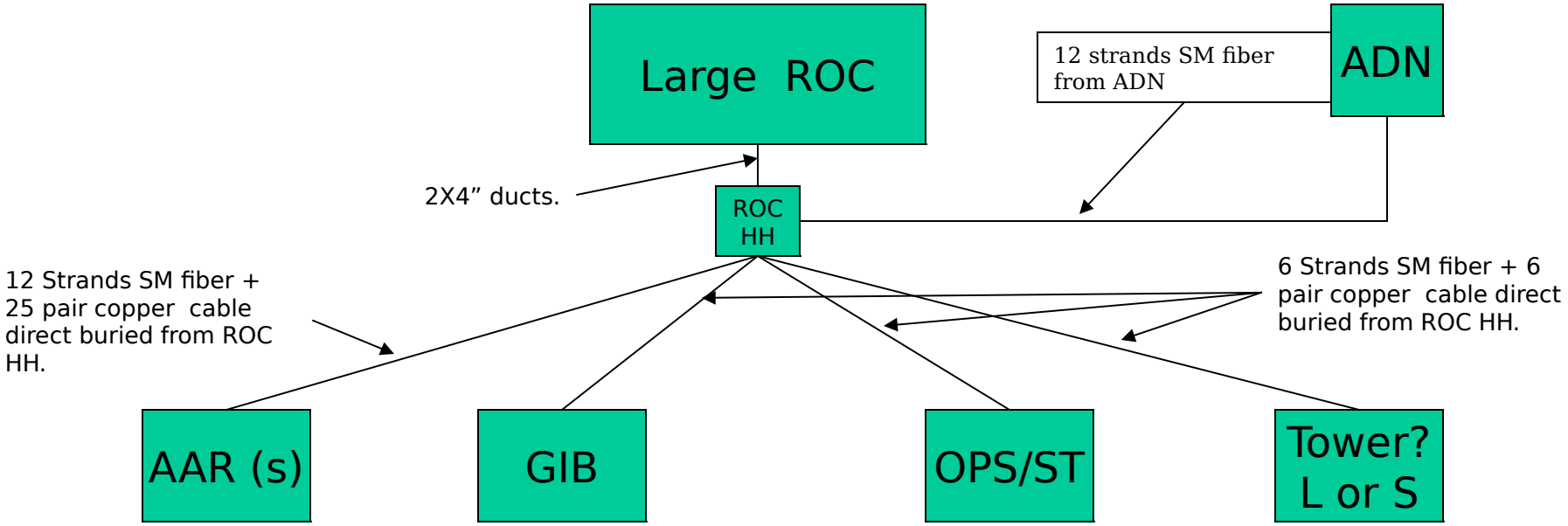
- **Discussion:** Lack of FTI connectivity restricts full usage of the LVC infrastructure for mission rehearsals & training when units are in the northern TAs. FTI does not provide coverage for all of Fort Bliss TAs. FTI coverage extends north, but there is limited FTI coverage north and east of Hwy506 (NE Corner of Bliss). IBCTs assigned to Ft Bliss under the GTA program are BFT equipped. There is an assumption that no HBCTs will go North of HWY 506 due to maneuver area restrictions. There is a restriction on the number of repeaters; maximum of five for the big FTI towers. FTI is not an officially recognized program by the Army but it is emplace and still required to support training. The installations with the most mature LVC-ITE (Hood, Lewis, JRMTC) all have and require fixed tactical internet capabilities.

- **Recommendation**: There is a requirement for a fixed tactical internet like capability for the LVC integrated training environment. Develop a Long term comprehensive communications plan that incorporates a FTI like capability.

Standard Armor (large) Ranges

The number and type of buildings will vary with the different type of ranges, This is a general layout.

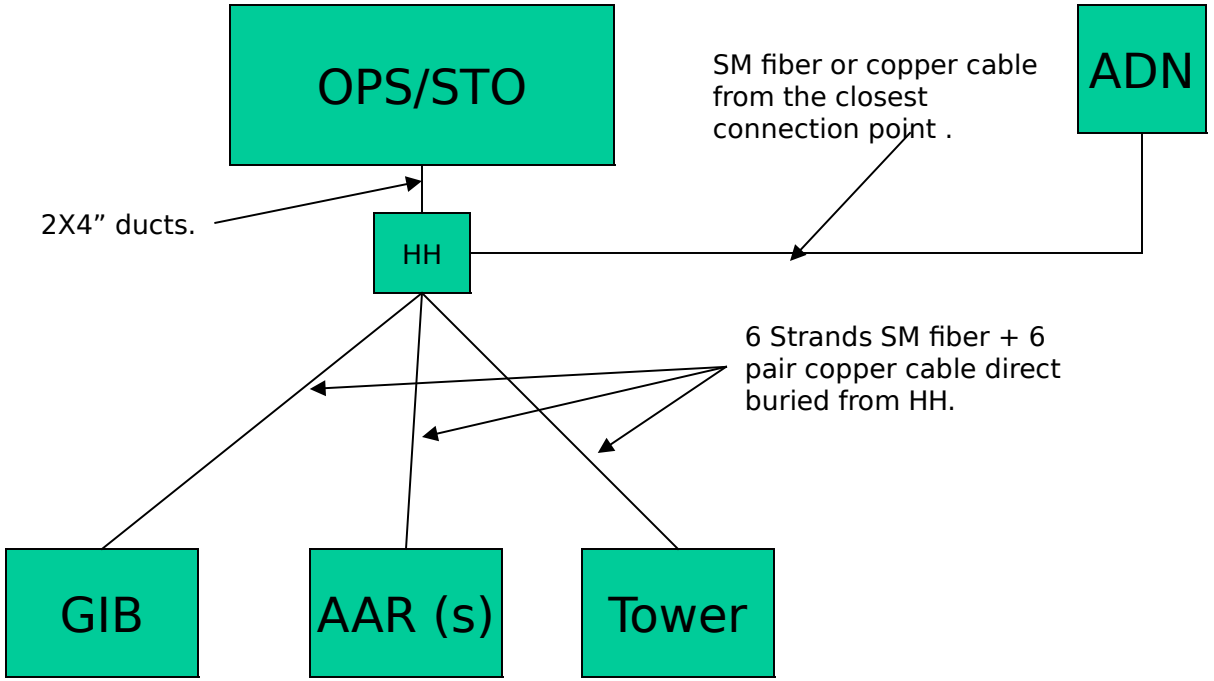
All cable splicing will be accomplished in the ROC DOIM room and distributed through the ROC HH..


Large ROC
12 strands SM fiber from ADN
ADN
2X4" ducts.
ROC HH
12 Strands SM fiber + 25 pair copper cable direct buried from ROC HH.
6 Strands SM fiber + 6 pair copper cable direct buried from ROC HH.
AAR (s)
GIB
OPS/ST
Tower? L or S

Standard Small Arms Ranges

The number and type of buildings will vary with the different types of small arms ranges. This is a general layout.

All cable splicing will be accomplished in the OPS/STO building and distributed through the HH..



Infrastructure Connectivity

- **Enable LVC domains to communicate independent of BC systems**
- **2 Way wireless communications between BC and Virtual and Constructive domains**
- **2 Way gateway interface between BC and Virtual and Constructive domains**
- **2 Way Multi-level Security gateway interface between BC and Virtual and Constructive domains**
- **Multi-level interface between LVC domains**
- **BFT and EPLRS interface with BC systems; Interface with Virtual and Constructive domains**
- **LAN/WAN network**

Connection/Interfaces

Current tools (COTS/GOTS) available for consideration

Interfaces

- STORM (Simulation Testing Operations Rehearsal Model)
- SIMPLE
- ExCIS

Multi-Level Security

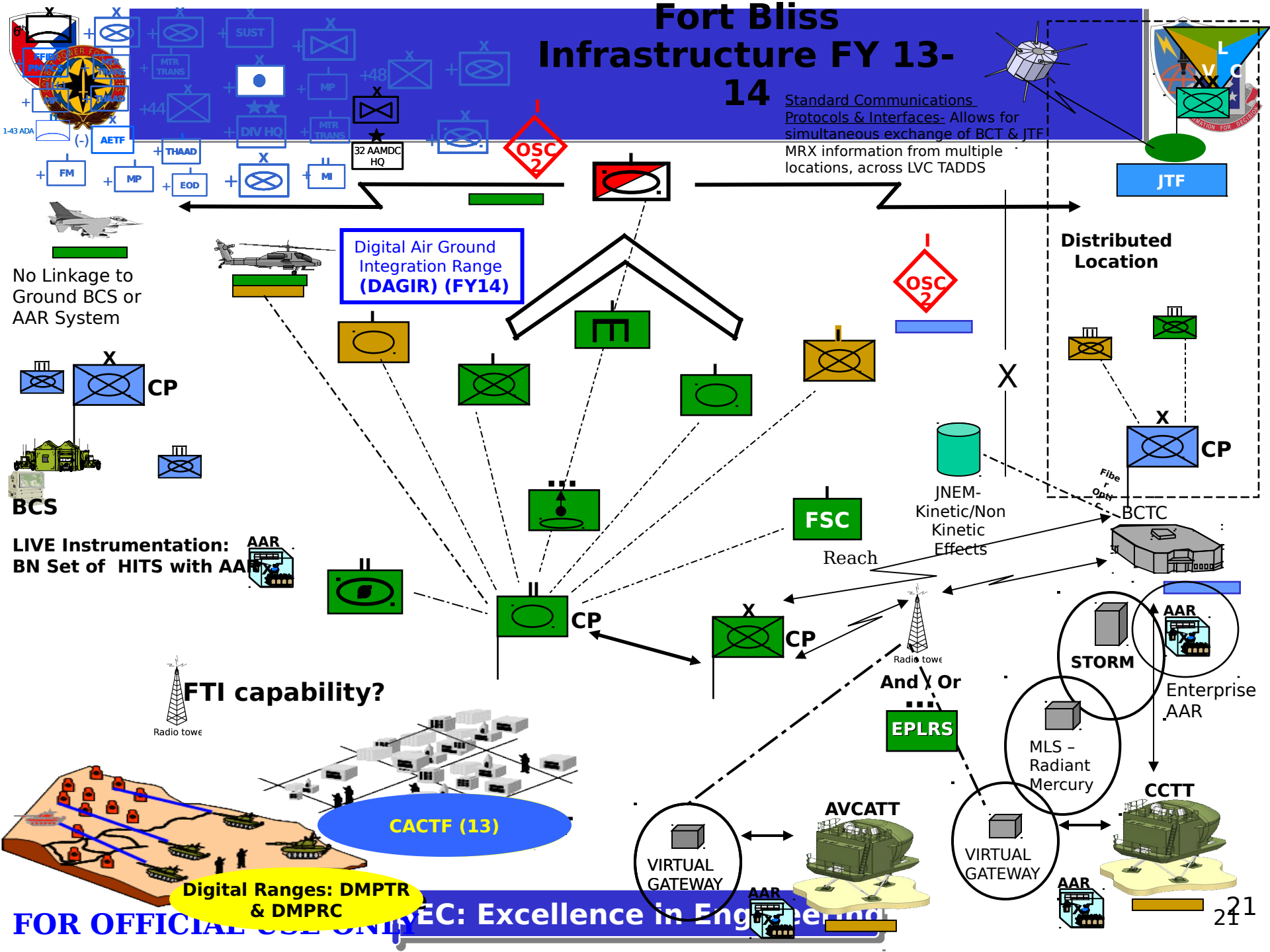
- Radiant Mercury

Networks

- FTI
- DMDS
- Optical Fiber
- Micro-wave vans
- JTEN
- TENA
- DREN

Fort Bliss Infrastructure FY 13-14

Standard Communications Protocols & Interfaces- Allows for simultaneous exchange of BCT & JTF MRX information from multiple locations, across LVC TADDS



Battle Command Training Capability
Major Construction Army (BCTC MCA) and Standard Design

Entrance Perspective

PRESENTED TO:
Army Standing Committee
15-16 April 2008
Ft Hood, Texas

PRESENTED BY:
Mr. Rickey Smith &
Mr. Robert Marx
ISEC

BATTLE COMMAND TRAINING FACILITY (BCTF)

Cornerstone of the Battle Command Training Capability Campus

- **Facility is designed to support known and projected Hub/Spoke requirements. Provides:**
  - **Digital growth to support FCS**
  - **LVC integration**
  - **Distributed training—inter- and intra-garrison**
  - **Reach for virtual right-seat-ride**

- **Facility is dedicated to Battle Command training:**
  - **Day-to-day individual and collective digital training**
  - **C4ISR integration / reconfigurable TOCs**
  - **Battle staff training, DIGEX, MRX**
  - **Small, medium, or large footprint based on training throughput**

- **Facility provides greater capability than predecessors (BSC, MSTF) for:**
  - **Digital and simulation/stimulation-supported training**
  - **Leveraging existing capabilities, facilities, and network for integration of LVC**
  - **BC support to FORSCOM and TRADOC units on installation**

BCTC DESIGN TEAM

Primary Members

- HQDA G-3/5/7 DAMO TR
  - Mr. Macia
  - LTC Anderson
  - MAJ Newcomb
- CIO/G6
  - Mr. Smith (LNO)
- NSC (EA)
  - Mr. Buchberg
  - Mr. Clary
- Huntsville Center Installation Support Center of Expertise
  - Mr. Fleming
  - Mr. Kelley
- CTD
  - Mr. Bowman
  - Mr. Van Nuys
- FORSCOM
  - Mr. Murphy
- IMA
  - Mr. Sciascia

Contributing Members

- USACE Districts
- Installation staffs
  - DPTMS
  - DPW
  - BSC
  - FP/AT
- Installation Senior Mission Commander
- BCTP
- NSC
- Corps (I, III, XVIII)
- USAREUR
- USARPAC
- USAR
- NGB
- PM Field Ops
- TPIO-Live
- PMCS
- ESS, Huntsville
- ***ISEC & CTTA***

BCTC FACILITY MODERNIZATION AUTHORITY

- **<u>Regulatory Authority</u>: AR 350-1**
  - Para 1-13: defines TSS modernization construction process
  - DAMO-TRS (TBWG MDEP) controls and directs funding.
  - It does not 'compete' with other non-training MCA projects.

- **<u>DAMO-TRS Guidance</u>**:
- Design a facility focused on supporting BC Tng for modular units from BCTs to Army HQs.
-
- Make it easy to modify and expand to meet changing training resource requirements.

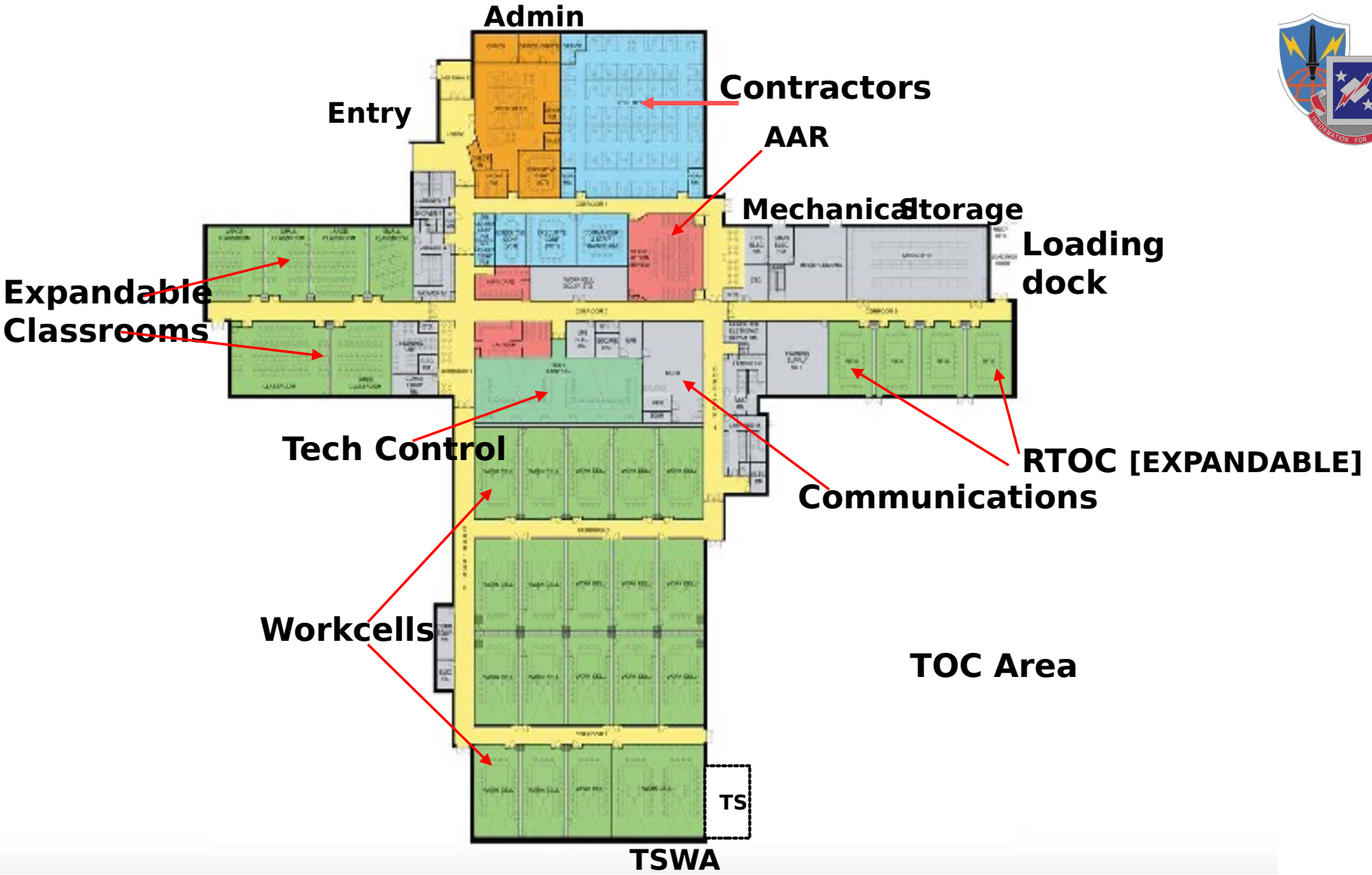
- Put emphasis on functionality, limit extraneous features.

- Support current and programmed BCTC capabilities

DESIGN GUIDANCE

- Function drives form
- Meets future Hub/Spoke training requirements
  - Simulations (ERF / MRF and follow on)
  - Reach (Virtual Right Seat Ride)
  - SCIF and/or Top Secret Working Area
- Within budget and Congressional directives
- Size based on installation's known and anticipated training requirements
- Standardized design and furnishings
- Meets DA design guides yet retains installation-unique signature

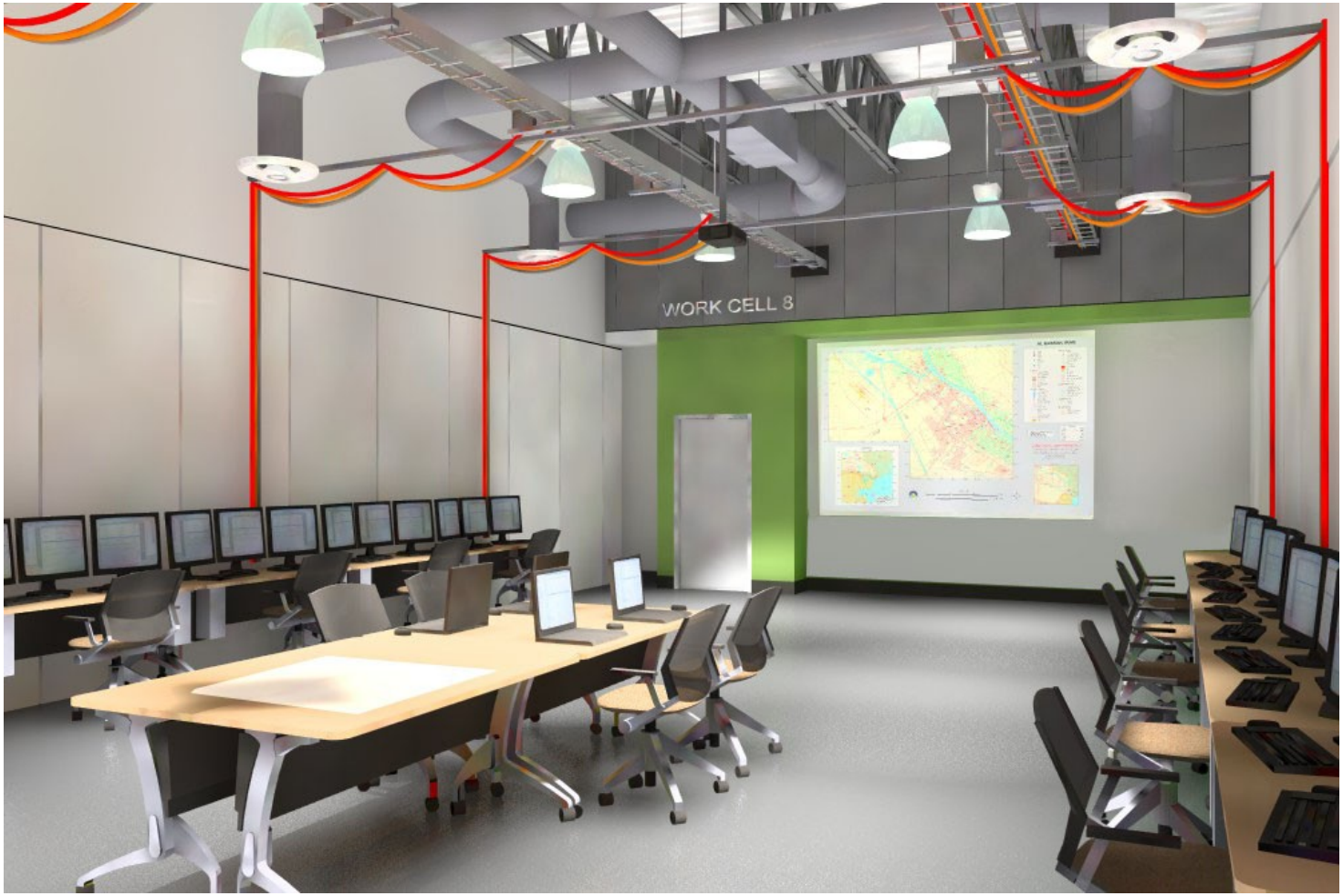
TOC Pad and TSCIF



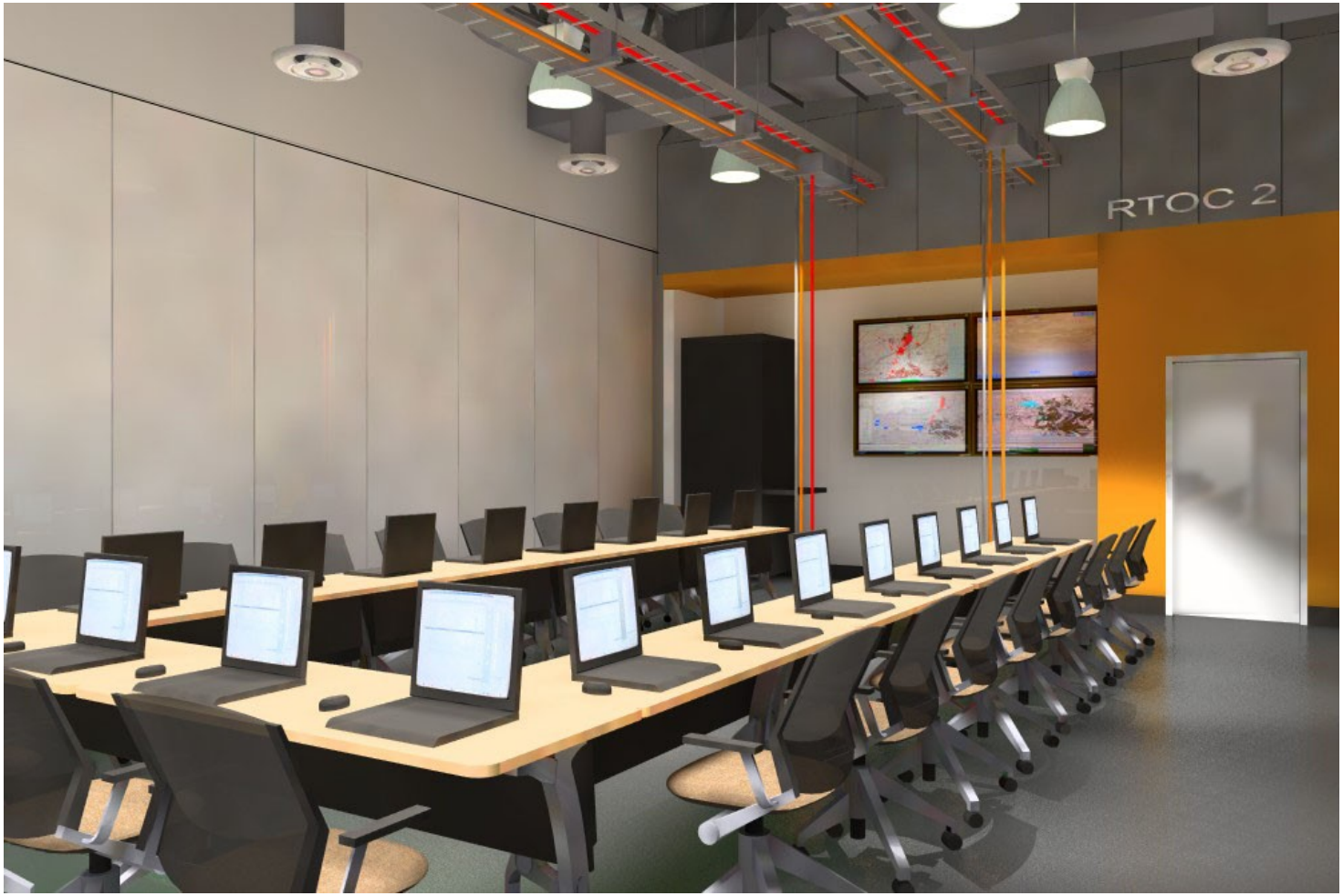
BCTC FLOOR PLAN

Conceptual Classroom Rendering

Conceptual Work Cell Rendering



Conceptual RTOC Rendering



Digital TOC – Tactical Setup

SCIF/TSWA

- SCIF at Hub
- Temporary Secure Working Area (TSWA) at Division Spoke
  - Temporarily accredited facility
  - Special construction for sound attenuation only Used no more than 40 hours monthly for SCI
  - No SCI storage (equipment or materials)
  - SCI connectivity through adjacent TOC pad/PDS
  - Decision based on DA guidelines, cost, training requirements, existing capabilities, and frequency of use.

Typical Network Items

- Routers, Switches, Hubs as required (limited #)
- Racks, frame racks for new equipment requirements
- NTP Time Server, MPEG2 encoder/decoder
- Video distribution / transmission system components & upgrade
- Limited UPS for critical new Hardware systems
- Cat cable, Video cable, Connectors, Media converters

Reconfigurable TOCs

- Allow units to train / maintain perishable C4ISR skills without deploying tactical equipment.

  - Provide flexible training:
  - From battle staff to staff section to individual.
  - Brigade and battalion command and staffs one day; battalion and company digital lanes the next

  - C4ISR refresher training prior to digital range complex deployments

- Adapt for units with varying C4ISR configurations.

BCTC DEVELOPMENT SYSTEM AND PLANNING DATEFRAMES

INSTALLATION	MDEP/ PROJ NUM	SIZE	MCA FY	Project Authorization	Calendar Year Start Point	Initial SITE SURVEY	DESIGN DIRECTIVE	INITIAL CHARRETTE	35% DESIGN	65% DESIGN	95% DESIGN	FINAL	CONST RFB	BEGIN CONST	End Construction	Total $ Requirement	Total $ OPA Requirement	Total $ OMA Requirement	REQUIRED FY FUNDING	COMMENTS
FT CAMPBELL	ZTAC	Medium	FY 07	$24.40	Oct-06	Apr-06	Oct-06	April-06	Jul-06	Oct-06	Feb-07		Mar-07	Jul-07	Aug-09	$8.32	$7.65	$0.67	2009	
FT BLISS	EIPG/ 64816	Medium	FY 07	$27.00	Oct-06	May-06	May-06	April-06	Nov-06	Feb-07	May-07	Apr-07	Jun-07	Oct-07	Jul-09	$8.32	$7.65	$0.67	2009	
FT RILEY	EIPG/ 55296	Medium	FY 07	$27.00	Oct-06	May-06	Oct-06	Nov-06	Feb-07	Jun-07	Oct-07	Nov-07	Jan-08	May-08	Apr-09	$8.32	$7.65	$0.67	2009	
FT BENNING [NON-BCTC]	TBWG/ 67648	Small	FY 08	$56.00	Oct-07										May-11	$7.40	$6.83	$0.58	2011	Estimated completion year provided by Greg Crocket.
FT SAM HOUSTON	TBWG/ 66824	Small	FY 08	$1.95	Oct-07	Mar-07	Sep-07	October-07	Jan-08	Apr-08	Jul-08	Aug-08	Aug-08	Sep-08	Jul-09	$7.40	$6.83	$0.58	2009	
CAMP ZAMA	EIGP/ 62654	Small	FY 09	$17.50	Oct-08	Nov-06	Oct-07	Nov-07	Jan-08	May-08	Sep-08	Nov-08	Jan-09	May-09	Jul-10	$7.40	$6.83	$0.58	2010	
FT BRAGG	TBWG/ 20347	Large	FY 10	$43.00	Oct-09	Nov-07	Oct-08	Nov-08	Jan-09	May-09	Sep-09	Nov-09	Jan-10	May-10	May-12	$12.71	$11.50	$1.21	2012	
FT LEONARD WOOD	ERVT/ 54253	Small	FY 10	$19.50	Oct-09	Dec-07	Nov-08	Dec-08	Feb-09	Jun-09	Oct-09	Dec-09	Feb-10	Jun-10	Aug-11	$7.40	$6.83	$0.58	2011	
FT SILL [JFETS]	TSAM		FY 10	$27.00	Oct-09										Jun-12	$0.00	$0.00	$0.00	2012	
FT CARSON	TBWG/ 13852	Medium	FY 11	$30.00	Oct-10	Nov-08	Oct-09	Nov-09	Jan-10	May-10	Sep-10	Nov-10	Jan-11	May-11	Jan-13	$8.32	$7.65	$0.67	2013	
VICENZA ITALY	TBWG/ 64079	Medium	FY11	$27.00	Oct-10	Dec-08	Nov-09	Dec-09	Feb-10	Jun-10	Oct-10	Dec-10	Feb-11	Jun-11	Feb-13	$8.32	$7.65	$0.67	2013	
FT RICHARDSON	EAMF/ 57369	Small	FY 11	$34.00	Oct-10	Jan-09	Dec-09	Jan-10	Mar-10	Jul-10	Nov-10	Jan-11	Mar-11	Jul-11	Sep-12	$7.40	$6.83	$0.58	2012	
FT BENNING	TBWG/ 64790	Small	FY12	$18.20	Oct-11	Nov-09	Oct-10	Nov-10	Jan-11	May-11	Sep-11	Nov-11	Jan-12	May-12	Jul-13	$7.40	$6.83	$0.58	2013	
FT STEWART	TBWG/ 39614	Medium	FY 12	$27.00	Oct-11	Dec-09	Nov-10	Dec-10	Feb-11	Jun-11	Oct-11	Dec-11	Feb-12	Jun-12	Feb-14	$8.32	$7.65	$0.67	2014	
FT SILL BCTC	TBWG/ 64815	Small	FY 12	$23.00	Oct-11	Jan-10	Dec-10	Jan-11	Mar-11	Jul-11	Nov-11	Jan-12	Mar-12	Jul-12	Sep-13	$7.40	$6.83	$0.58	2014	Moved Sill funding to FY14, since construction is not completed until Sep 03
CAMP HUMPHREYS	TBWG	Medium	FY 12		Oct-12										Jan-12	$8.32	$7.65	$0.67	2012	
FT HOOD	TBWG	Large	FY 13	$51.00	Oct-12	Nov-10	Oct-11	Nov-11	Jan-12	May-12	Sep-12	Nov-12	Jan-13	May-13	May-15	$12.71	$11.50	$1.21	2015	
FT SAM HOUSTON	TBWG	Small	FY 13	$19.50	Oct-12	Dec-10	Nov-11	Dec-11	Feb-12	Jun-12	Oct-12	Dec-12	Feb-13	Jun-13	Aug-14	$7.40	$6.83	$0.58	2014	
FT DIX	TBWG/ 70685	Medium	FY 14	$34.00	Oct-13	Nov-11	Oct-12	Nov-12	Jan-13	May-13	Sep-13	Nov-13	Jan-14	May-14	Jan-16	$8.32	$7.65	$0.67	2016	Revised from $27M to $34M based on USACE estimates
FT Knox	TBWG/ 70686	Small	FY 14	$18.70	Oct-13	Dec-11	Nov-12	Dec-12	Feb-13	Jun-13	Oct-13	Dec-13	Feb-14	Jun-14	Aug-15	$7.40	$6.83	$0.58	2015	Revised from $20M to $18.7M based on USACE estimates
FT Lee	TBWG/ 70687	Small	FY 14	$18.70	Oct-13	Jan-12	Dec-12	Jan-13	Mar-13	Jul-13	Nov-13	Jan-14	Mar-14	Jul-14	Sep-15	$7.40	$6.83	$0.58	2015	Revised from $20M to $18.7M based on USACE estimates
FT Bragg (USASOC)	TBWG/ 70688	Small	FY15	$19.00	Oct-14	Nov-12	Oct-13	Nov-13	Jan-14	May-14	Sep-14	Nov-14	Jan-15	May-15	Jul-16	$7.40	$6.83	$0.58	2016	Revised from $20M to $19M based on USACE estimates
Shaw AFB (USARCENT)	TBWG	Small	FY 15	$20.00	Oct-14	Dec-12	Nov-13	Dec-13	Feb-14	Jun-14	Oct-14	Dec-14	Feb-15	Jun-15	Aug-16	$7.40	$6.83	$0.58	2016	
ARNG (Gowen Field, Boise ID)	TBWG/ 70996	Small	FY 15	$19.00	Oct-14	Jan-13	Dec-13	Jan-14	Mar-14	Jul-14	Nov-14	Jan-15	Mar-15	Jul-15	Sep-16	$7.40	$6.83	$0.58	2016	Revised from $20M to $19M based on USACE estimates

BCTC SIZE	Total Equipment, Furniture, Sim/Stim, Install	Total OPA	Total OMA	Total Sim/Stim Fielding	Total Less Sim/Stim Fielding
Small	$7,403,541	$6,828,349	$575,192	$3,802,850	$2,840,637
Medium	$8,319,385	$7,651,099	$668,286	$4,106,600	$3,369,473
Large	$12,705,579	$11,499,960	$1,205,619	$6,433,400	$5,117,127

FY $ Required	Total Equipment, Furniture, Sim/Stim, Install	Total OPA	Total OMA
2009	$32,361,696	$29,781,646	$2,580,050
2010	$7,403,541	$6,828,349	$575,192
2011	$14,807,082	$13,656,698	$1,150,384
2012	$28,428,505	$25,979,408	$2,449,097
2013	$24,042,311	$22,130,547	$1,911,764
2014	$23,126,467	$21,307,797	$1,818,670
2015	$27,512,661	$25,156,658	$2,356,003
2016	$30,530,008	$28,136,146	$2,393,862

The dateframes and the schedule methodology are based on the following: The design directive is normally issued early (Oct) in the FY 2 years prior to the FY in which the construction bid will be let (the project year). This essentially restricts the planning /design/ RFB cycle to two calendar years. The Design Directive gives the authority to proceed with the project and provides funding (and authorization) to commit funds for design i.e. to hire an A&E firm

Certification & Accreditation

- Type C&A will be done by the NSC for all new BCTCs.
(Ft Campbell will be the first one)

- Type C&A was recommended by Ms Sally Dixon, CIO/G-6, for the BCTCs during meeting on 19 March 2008.

- Ms Kathy Laymon, NETCOM, is working the Networthiness issues with the NSC Team.

- TEMPEST Agreement signed by Chief of TEMPEST Section, USA INSCOM on 21 Feb 08

QUESTIONS

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BACKUP SLIDES
RANGE PROJECTS
ON
ARMY MASTER RANGE PLAN

Fort Bliss

Project APP	FY	Project Number	Project Title	PA
MCA	2007	63887	LIGHT DEMOLITION RANGE	1750
MCA	2007	63876	SHOOTHOUSE	2000
MCA	2007	63878	SHOOTHOUSE	2000
MCA	2007	63886	URBAN ASSAULT COURSE (UAC)	2150
MCA	2007	63888	COMBAT PISTOL/MILITARY QUALIFICATION CRS (CP/MPQC)	2250
MCA	2007	63877	MULTIPURPOSE MACHINE GUN (MPMG)	3950
MCA	2007	63884	INFANTRY PLATOON BATTLE COURSE (IPBC)	4650
MCA	2008	63874	DIGITAL MULTIPURPOSE TRAINING RANGE (DMPTR)	15000
MCA	2008	63875	URBAN ASSAULT COURSE (UAC)	2300
MCA	2008	63883	INFANTRY SQUAD BATTLE COURSE (ISBC)	2400
MCA	2008	63881	CONVOY LIVE FIRE RANGE	3200
MCA	2008	20141	COMBINED ARMS COLLECTIVE TRAINING FACILITY (CACTF)	18500
MCA	2009	61371	DIGITAL MULTIPURPOSE RANGE COMPLEX (DMPRC)	42000
MCA	2010	63879	DIGITAL AIR/GROUND INTEGRATION RANGE (DAGIR)	44000
MCA	2013	66912	MODIFIED RECORD FIRE (MRF)	4800
MCA	2013	66913	25m ZERO RANGE	2400
MCA	2013	66922	COMBAT PISTOL/MILITARY QUALIFICATION CRS (CP/MPQC)	3100
MCA	2013	66911	MULTIPURPOSE MACHINE GUN (MPMG)	8300

Bragg

Project APP	FY	Project Number	Project Title	PA
MCA	2006	57314	URBAN ASSAULT COURSE (UAC)	2100
MCA	2008	63437	INDOOR BAFFLE RANGE	4800
MCA	2010	68759	MULTIPURPOSE MACHINE GUN (MPMG)	7000
MCA	2011	67013	SNIPER FIELD FIRE	4000
MCA	2013	71710	25m ZERO RANGE	2200
MCA	2013	55121	AERIAL GUNNERY RANGE	36000
MCA	2014	71724	SHOOTHOUSE	3200

Campbell

Project APP	FY	Project Number	Project Title	Project Title	PA
MCA	2006	51833	FORSCOM	COMBINED ARMS COLLECTIVE TRAINING FACILITY (CACTF)	10300
MCA	2006	57764	FORSCOM	URBAN ASSAULT COURSE (UAC)	1700
MCA	2008	63483	USASOC	INDOOR BAFFLE RANGE	5000
MCA	2011	67015	FORSCOM	SNIPER FIELD FIRE	4000
MCA	2011	67040	USASOC	FAST-ROPE SNIPER RAPPEL TOWER	5500
MCA	2012	71703	FORSCOM	SCOUT/RECCE GUNNERY RANGE	18000
MCA	2013	71712	USASOC	URBAN ASSAULT COURSE (UAC)	3350
MCA	2013	71713	USASOC	SHOOTHOUSE	3450
MCA	2013	71711	FORSCOM	INFANTRY SQUAD BATTLE COURSE (ISBC)	4600
MCA	2014	71725	FORSCOM	INFANTRY PLATOON BATTLE COURSE (IPBC)	7100
MCA	2014	TBD	USASOC	TRAINING TOWER	1200

CARSON

Project APP	FY	Project Number	Project Title	PA
MCA	2005	52842	DIGITAL MULTIPURPOSE RANGE COMPLEX (DMPRC)	33000
MCA	2006	001080000	COMBINED ARMS COLLECTIVE TRAINING FACILITY (CACTF)	28000
MCA	2006	57648	SHOOTHOUSE	1250
MCA	2006	59668	SHOOTHOUSE	1250
MCA	2008	62812	INDOOR BAFFLE RANGE	4900
MCA	2011	41917	SNIPER FIELD FIRE	4000
MCA	2011	71693	QUALIFICATION TRAINING RANGE (QTR)	11000
MCA	2012	71704	COMBINED ARMS COLLECTIVE TRAINING FACILITY (CACTF)	
MCA	2013	65621	MODIFIED RECORD FIRE (MRF)	4900
MCA	2013	59626	DIGITAL MULTIPURPOSE TRAINING RANGE (DMPTR)	25000

HOOD

Project APP	FY	Project Number	Project Title	PA
MCA	2005	52001	DIGITAL MULTIPURPOSE TRAINING RANGE (DMPTR)	28200
MCA	2006	52000	QUALIFICATION TRAINING RANGE (QTR)	6032
MCA	2006	52002	SCOUT/RECCE GUNNERY RANGE	7920
MCA	2007	57131	COMBINED ARMS COLLECTIVE TRAINING FACILITY (CACTF)	28000
MCA	2010	57130	URBAN ASSAULT COURSE (UAC)	2350
MCA	2010	71692	MULTIPURPOSE MACHINE GUN (MPMG)	6700
MCA	2011	71694	INFANTRY SQUAD BATTLE COURSE (ISBC)	7000
MCA	2012	66532	CONVOY LIVE FIRE RANGE	6500
MCA	2012	71706	URBAN ASSAULT COURSE (UAC)	3500
MCA	2013	67020	MODIFIED RECORD FIRE (MRF)	4000
MCA	2013	57134	SHOOTHOUSE	3000
MCA	2013	71715	INFANTRY SQUAD BATTLE COURSE (ISBC)	3900
MCA	2014	52006	DIGITAL MULTIPURPOSE RANGE COMPLEX (DMPRC)	33000
MCA	2014	52005	DIGITAL AIR/GROUND INTEGRATION RANGE (DAGIR)	37000
MCA	2015	71777	INFANTRY PLATOON BATTLE COURSE (IPBC)	7500

LEONARD WOOD

Project APP	FY	Project Number	ACOM	Project Title	PA
MCA	2008	68758	FORSCOM	MULTIPURPOSE MACHINE GUN (MPMG)	4000
MCA	2008	68760	FORSCOM	COMBAT PISTOL/MILITARY QUALIFICATION CRS (CP/MPQC)	2600
MCA	2008	58299	TRADOC	MODIFIED RECORD FIRE (MRF)	3800
MCA	2008	58303	TRADOC	MODIFIED RECORD FIRE (MRF)	4000
MCA	2009	58717	TRADOC	URBAN ASSAULT COURSE (UAC)	2350
MCA	2009		TRADOC	AUTOMATED FIELD FIRE (AFF)	

LEWIS

Project APP	FY	Project Number	ACOM	Project Title	PA
MCA	2010	41842	FORSCOM	SHOOTHOUSE	2150
MCA	2008	63327	USASOC	INDOOR BAFFLE RANGE	5000
MCA	2010	66531	FORSCOM	MODIFIED RECORD FIRE (MRF)	4000
MCA	2013	67164	FORSCOM	MODIFIED RECORD FIRE (MRF)	5000

LEWIS YTA

Project APP	FY	Project Number	ACOM	Project Title	PA
MCA	2008	43088	FORSCOM	DIGITAL MULTIPURPOSE RANGE COMPLEX (DMPRC)	29000
MCA	2011	54106	FORSCOM	MULTIPURPOSE MACHINE GUN (MPMG)	9500
MCA	2011	65386	FORSCOM	SNIPER FIELD FIRE	4000
MCA	2013	71718	FORSCOM	COMBINED ARMS COLLECTIVE TRAINING FACILITY (CACTF)	29500
MCA	2014	63311	FORSCOM	DIGITAL AIR/GROUND INTEGRATION RANGE (DAGIR)	45000
MCA	2014	71726	FORSCOM	MULTIPURPOSE MACHINE GUN (MPMG)	9100